More About Spraying.

Editors Progressive Farmer:

In The Progressive Farmer for February 16th we advised spraying apple and peach trees with Bordeaux mixture and Paris green, and gave complete, though brief, directions for the work. We wish here to repeat that spraying more than any other one operation will restore our now unprofitable apple and pear orchards to productiveness. Not until we learn to spray properly every year can we expect to get good fruit crops, but when we do learn to do this we will have good yields of fruit,—that is, provided the trees are reasonably well cared for with regard to cultivation, fertilization and pruning. Of course, a starved tree, or one full of dead or weakened branches, cannot be expected to bear in any event. Sometimes they do bear in spite of such disadvantages, but it is far better to trim out all the diseased, dead, or unnecessary branches. Now (late winter) is the best season for trimming trees preparatory to spraying.

Of course you must have a spray pump in order to spray thoroughly. If you have "Entomological Circular, No. 4," on "Spraying Apparatus," you will be able to select a suitable pump. If you have not that circular, write to me for it. Then you must know how to prepare and apply the mixture. Full directions for this are given in "Entomological Circular, No. 6," on "Spraying Apples and Pears," and if you have not this circular also, write to me for it.

Now, let me impress another fact upon every reader of this article, and that is that this article and the circulars mentioned will not do you the slightest good if you do not put them to actual test. There are some who write for circulars and then throw them aside and think no more about it. We don't want to send these circulars to such persons. We want to send them to those who mean business, and who intend to follow the suggestions offered.

But some one says that this is all "theory"—that it is "very good on paper, but won't work in practice," etc. For the information of these doubtful ones, I will quote here a letter received a few days ago from a farmer in Catawba county. This man had just received and read "Entomological Circular, No. 6," on "Spraying Apples and Pears," and wrote to relate his experience. Here is his letter:

Catawba, N. C., Feb. 15, 1904.

Mr. Franklin Sherman, Jr.

Dear Sir: Your circular (No. 6) on spraying received. I sprayed my trees according to the rules for spraying in the spring of 1902, and apples and peaches were finer than I ever had. One tree that always bore full, but never matured well, after spraying the fruit was almost as large again and made us think it truly a nice apple. The peaches hung on and ripened nicely—something they had not done from time of planting. That year my Blackburn apples did not bloom.

I neglected spraying spring of 1903. My Blackburn apples were the fullest I ever knew them and good size, but they all dropped off prematurely, and what few we put up for winter use were wormy and imperfect.

So this year I intend spraying thoroughly, no matter how busy I may think I am, for I am sure that spraying is profitable to a small farmer even if he does not cater to the market. I have a splendid knapsack pump and know how to handle it.

Yours,

J. H. TROLLINGER.

There is not the slightest reason why any farmer of intelligence should not have plenty of fruit if he will carefully spray his trees. We refer now particularly to apples and pears. Let me state again the steps to be followed: First, give the trees reasonable care in regard to cultivation, fertilization and pruning. Second, get a good spraying apparatus,—"Ent. Circular No. 4," will aid you in this. Third, spray carefully at the proper times with properly prepared mixture and "Ent. Circular No. 6" will tell you about that. Fourth, do not make the mistake of thinking that spraying will make a tree bear, keep in mind all that is said on this subject in "Ent. Circular No. 6." Fifth, write to me for "Ent. Circulars 4 and 6" if you haven't them already. Sixth, let me know next summer just how the work succeeds in your orchard. Seventh, remember that the object of my work is to give information in regard to insects and you should write to me at any time upon that subject, always sending specimens in package separate from the letter.

FRANKLIN SHERMAN, JR.,
Entomologist, Department of Agriculture, Raleigh, N. C.

Live Stock and Dairy

CONDUCTED BY CHARLES WM. BURKETT,
Professor of Agriculture, N. C. A. & M College, and Agriculturist North Carolina Experiment Station.

Inquiries of Progressive Farmer readers cheerfully answered.

Live Stock Inquiries.

Editors Progressive Farmer:

I am glad The Progressive Farmer has taken on such new life. I hope to be a constant reader of it. I enjoy Dr. Burkett's letters on live stock and dairying. I commenced a little dairy business about a year ago, and would like to ask him a great many question. First, I would like to hear from him on silos and silage. Would he recommend building a silo for 20 cows? If so, what size? I should like to have a bill of material for same.

I would like some information on planting Bermuda grass. Will it do to let stock run on it the first year? I have some black mud land that I would like to put in Bermuda grass. I would also like to hear something on feeding calves.

Yours respectfully,

W. I. H.

Duplin Co., N. C.

(Answered by Dr. C. W. Burkett.)

Yes, I should have a silo. In fact, for the dairy business I should have a silo for as small a number as ten cows. During the past summer we built a round silo at the college which cost us $138, and which holds something like one hundred and fifty tons of ensilage. Where one does much of the work himself, the actual cost price may be considerably less than the price mentioned here. I would prefer the round or stave silo. In making such a silo use good staves or planks eight inches wide by two and one-half inches thick, and from sixteen to twenty-four feet long. These are to be set on end, and then held together by means of iron rods. For twenty cows one should have a silo that would hold around about one hundred and fifty tons.

The Silver Manufacturing Company of Salem, O., publishes a little book on "Modern Silage Methods" which is sent without cost to those interested in silos. This is an extremely valuable book, and I would suggest to all interested in silos that they write these people. There is also a bulletin published by the United States Department of Agriculture, Washington, D. C., on silos and ensilage, which will be sent on request.

In reference to Bermuda grass, I would not pasture it very extensively the first year. In fact, I think we make a mistake with all of our pastures when we pasture them the first year of their making. Bermuda pastures can be made by dropping the Bermuda roots all about over the field, and then with it I should sow some common red clover, to the extent of ten pounds per acre, and fine pounds of Japan clover per acre. The Japan clover and red clover will grow very quickly, and the Bermuda will extend itself. Of course the red clover will die out in short time, but you will receive a good deal of pasturage from its first year's growth, and besides this you will get all of that soil improving value, and the nitrogen which clover adds to the soil.

Now as to feeding calves. I think you will find the best success in calf feeding by immediately removing the calves when they are a day or so old from their mothers, teaching them at once to drink for themselves. I know there is a good many who say it is difficult to get young calves to take to drinking, yet I think that it is a practice that nearly every dairyman and breeder of dairy stock follows. Keep the calf on whole milk a few days, or two weeks, say, and then gradually change the whole milk to skim milk. I would make the change by using first three-fourths of whole milk and one-fourth of skim milk, then half and half, then one-fourth of whole milk and three-fourths of skim milk until you finally have all skim milk. By such feeding you will not give with it any fat, and it will be necessary therefore to give some corn in connection with the skim milk. Besides at this time the calf is old enough to nibble at hay or pasture, and will take to its food without further trouble. We have been using blood meal from the slaughter house with our calves to good advantage. Of course we only use a small quantity for one calf, from one to two table spoon fulls daily, and where we have been using it, we have not been troubled with the scours, or any of the other common calf diseases. I think that the use of blood meal will become general in the rearing of calves.

Why Churn Whole Milk?

Editors Progressive Farmer:

It seems to be a very common practice among the small dairymen at least, to churn the whole milk. We believe this would not be so generally done if it were known how many disadvantages this system has.

In the first place, whole milk is very bulky, requiring frequent churnings for a small amount of butter. When only the cream is churned one churning a week might be sufficient; if whole milk is churned it will be necessary to churn every day or every other day. And that means a lot of extra work.

It generally takes a longer time to churn whole milk than it does to churn cream. In order to get the butter to come within a reasonable length of time, a high churning temperature is used. A high churning temperature means that more fat will be left in the butter-milk. Furthermore, this smaller amount of butter will be of poor quality; since butter that is churned at a high temperature lacks quality, the texture is not good.

The butter-milk is not in as good a condition for feeding purposes as the skim-milk would have been had either the deep setting gravity system, or the centrifugal system been used to separate the cream.

Why then should we continue to churn whole milk? It means that one of the best foods for raising calves, namely skim milk, is changed into a form that is less valuable for feeding purposes. It means a greater loss of fat in the butter-milk. It means an increased amount of labor. And it also means not only a smaller yield of butter, but butter of inferior quality.

J. C. KENDALL.
A. & M. College, West Raleigh, N. C.

Warbles or Wolves in Cattle.

Editor Progressive Farmer:

I have a young Jersey cow very much affected with wolves in her back. I would be pleased to know what will cure her.

GEO. N. HICKS.

Vance Co., N. C.

(Answer by G. A. Roberts, D. V. S., A. & M. College, Raleigh.)

Warbles are the larval (worm stage) of the ox bot fly (Hypoderma Lineata). The larva in developing underneath the skin causes an enlargement at that point. When the larva is full grown it makes its way through an opening in the skin to the exterior, when it falls to the ground and in which it passes its dormant or pupa stage, before becoming the adult fly. The fly lays its eggs on the cattle during the fall months, the larva becoming mature leaves the animal during spring months or early summer, the pupa stage being of a month or six weeks duration.

No treatment will cause an abrupt expulsion of these larvae, other than by mechanical means, and to protect the cow or herd from a future infestation the larvae, before becoming mature, should be expelled from the nodules by opening same with the point of a clean knife blade, then with a little pressure the larvae may be squeezed out and destroyed by crushing.

This should be done in winter or early spring.